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**Steele**

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(54) **PACKAGE HAVING A SPOUT RESERVOIR/RETAINING FEATURE**

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| ***B65D 33/18*** | (2006.01) |
| *B65D 75/00* | (2006.01) |

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CPC ..... ***B65D 75/5866*** (2013.01); ***B65D 33/18*** (2013.01); *B65D 75/008* (2013.01); *B65D 75/5822* (2013.01); *B65D 2313/02* (2013.01); *B65D 2575/58* (2013.01)

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USPC ... 222/95, 107, 105, 528, 530, 541.9, 541.6; 383/906
See application file for complete search history.

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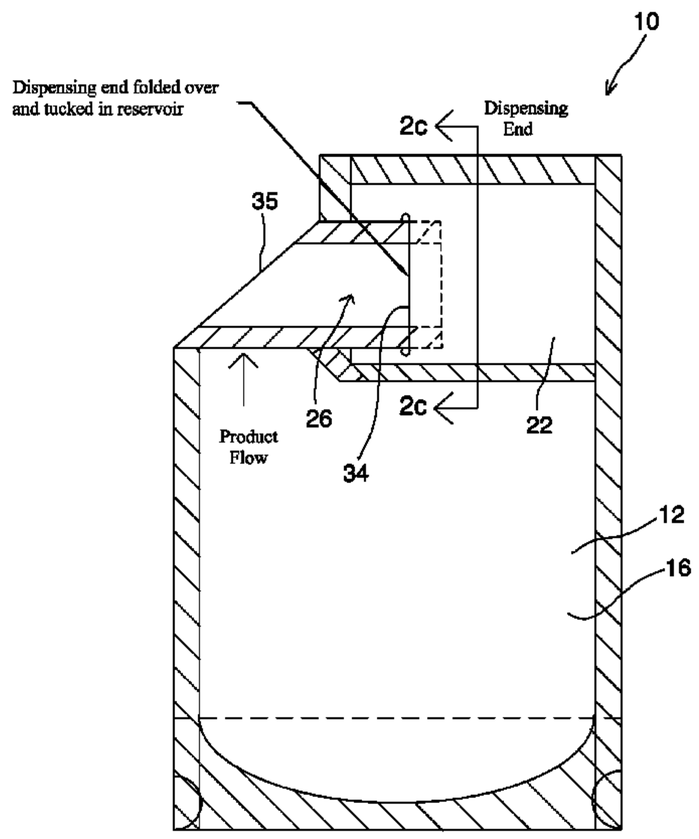
(57) **ABSTRACT**

A package designed to prevent the leakage of its contents and to capture any leaked contents within a package reservoir, while permitting the package to be sealed for later access to the contents of the package.

**13 Claims, 13 Drawing Sheets**



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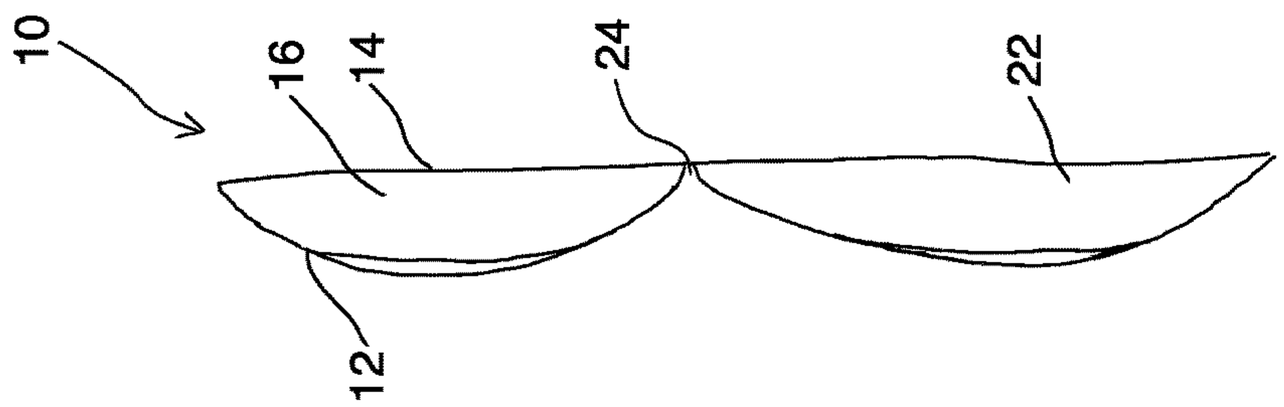

10
16
14
24
22
12
20

Fig. 1b

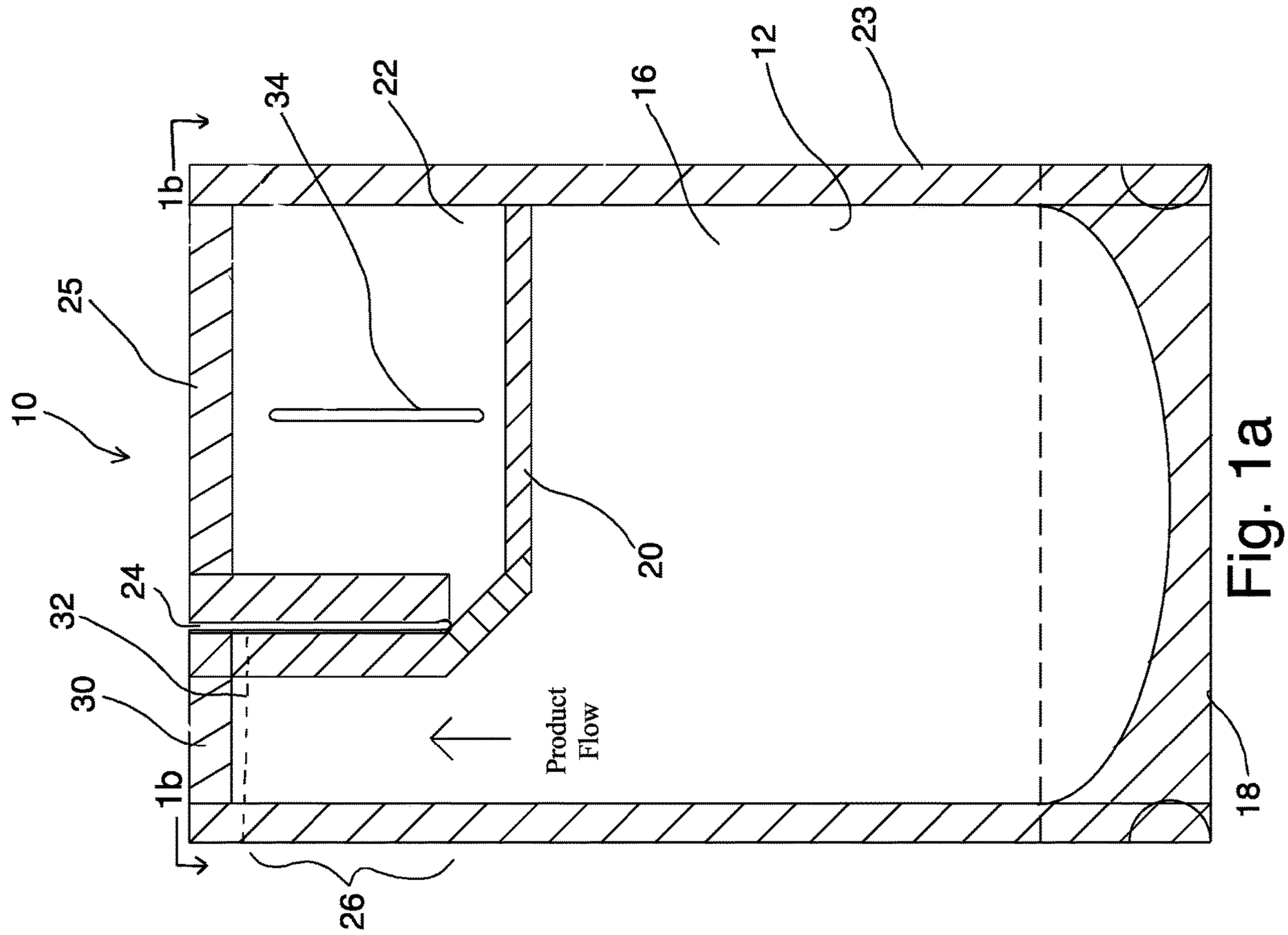

10
25
1b
34
22
16
12
23
24
32
30
1b
26
Product Flow
20
18

Fig. 1a

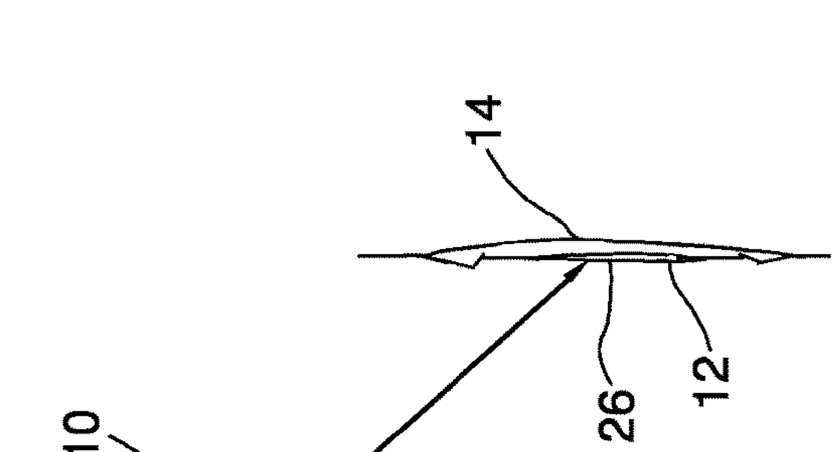



Fig. 2c

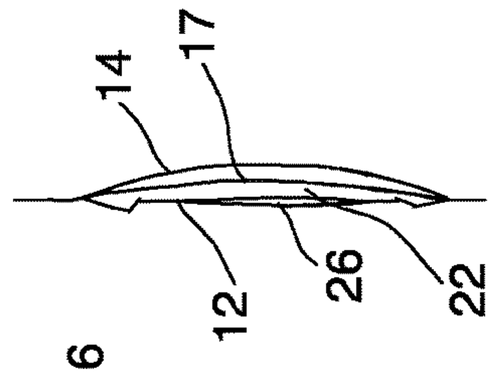



Fig. 2d

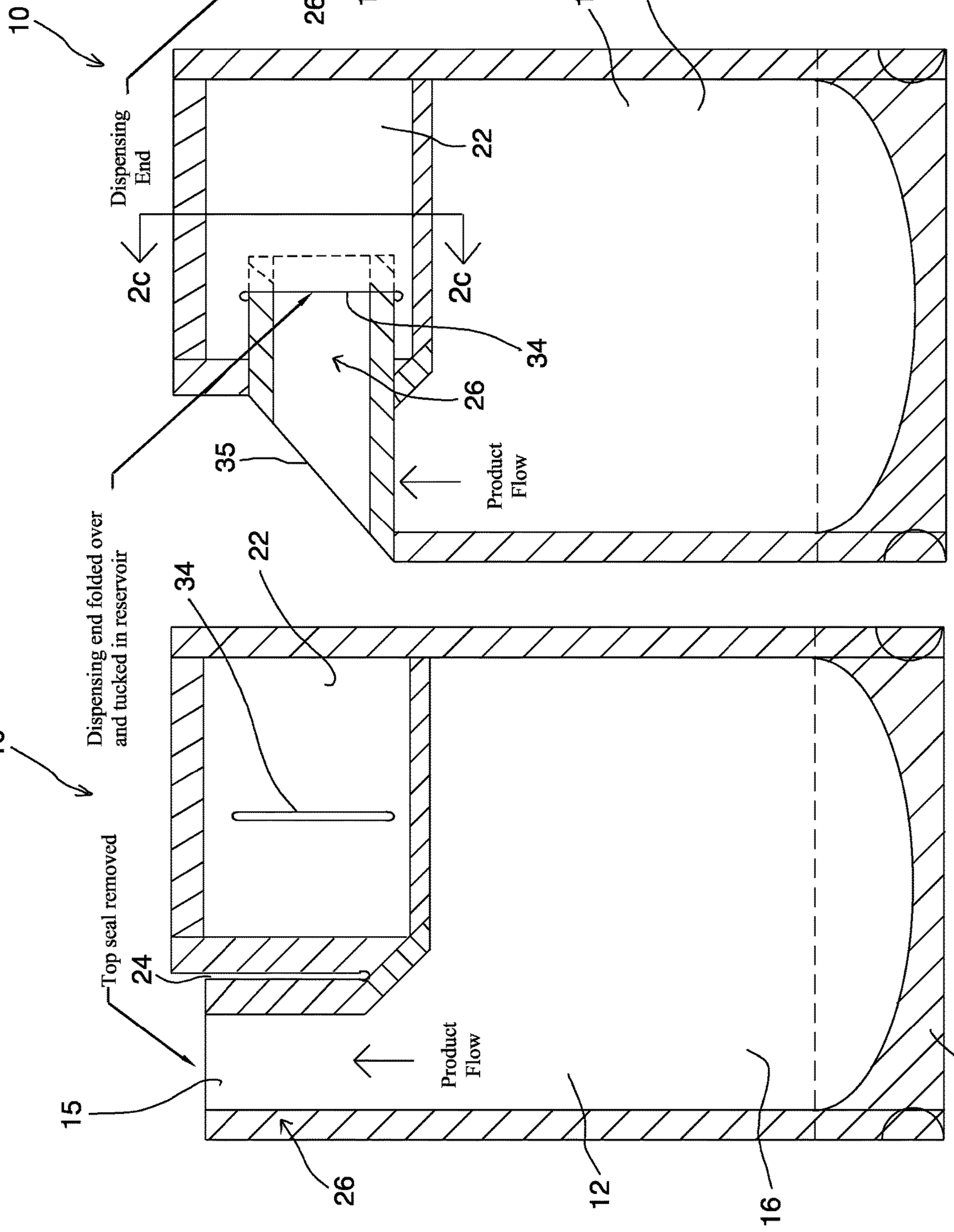



Fig. 2b

Fig. 2a

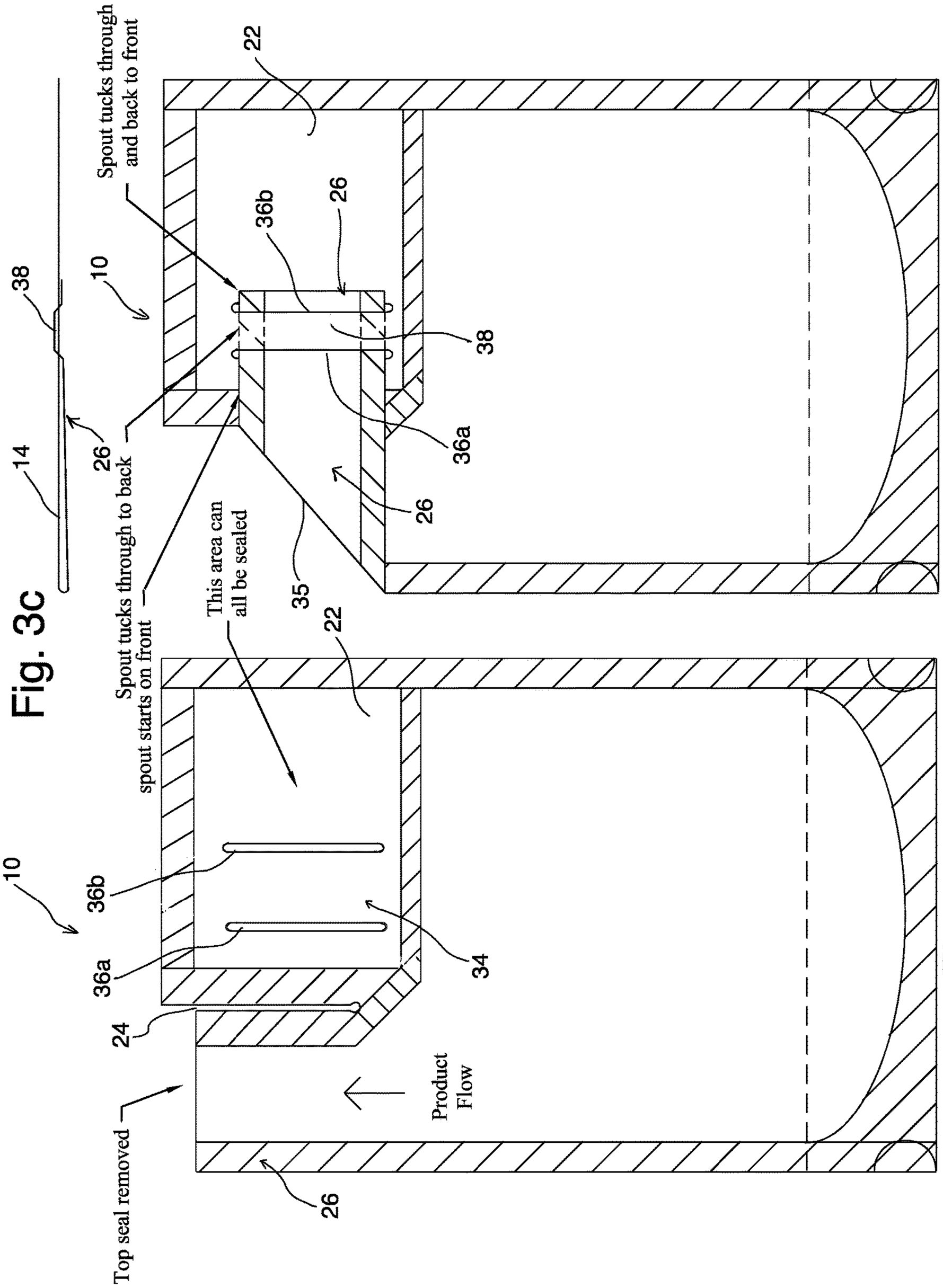
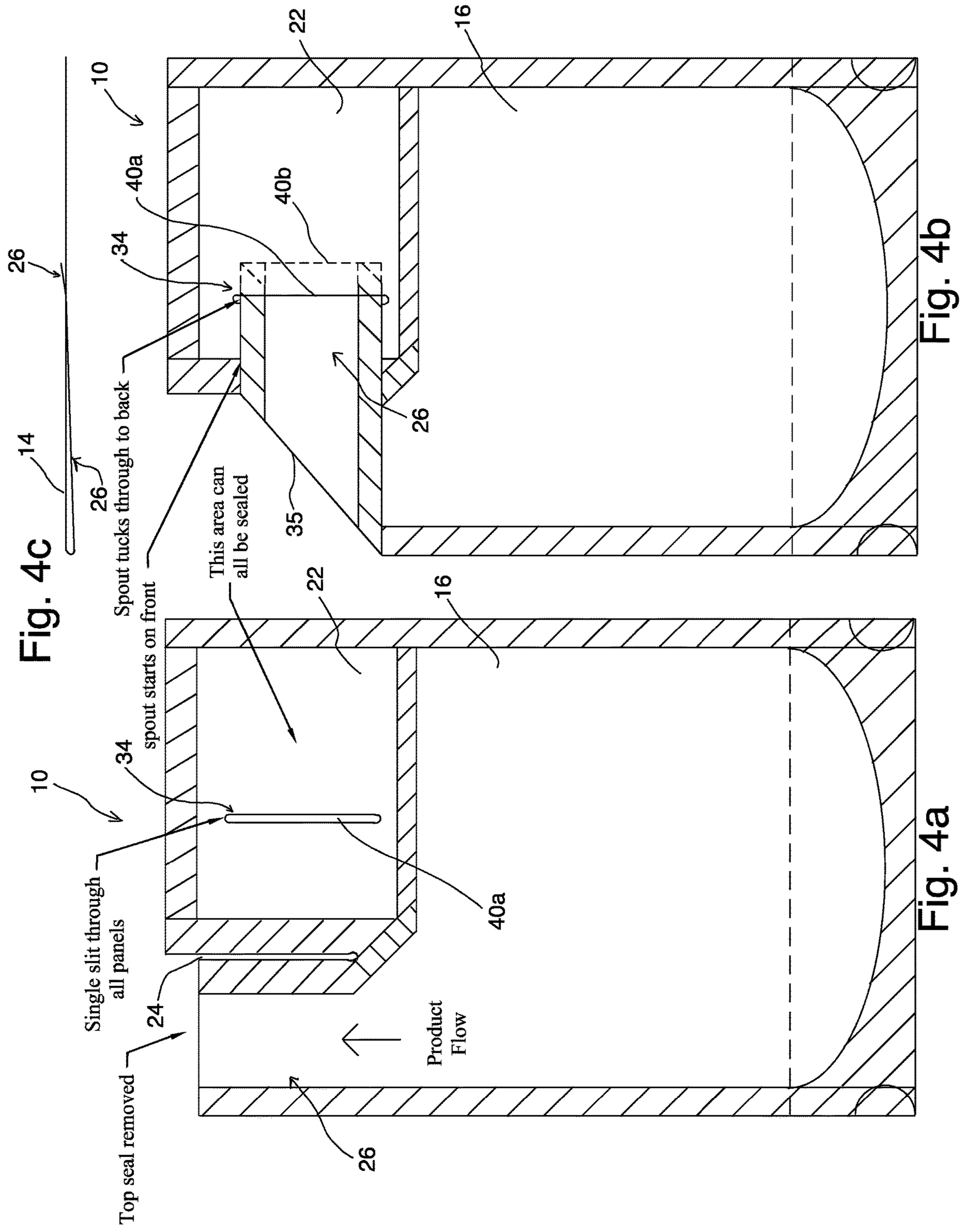



Fig. 3c

Fig. 3b

Fig. 3a


10
22
16
40a
40b
34
26
14
26
Spout tucks through to back
This area can all be sealed
35
26
Fig. 4c
Fig. 4b
10
34
spout starts on front
22
16
Single slit through all panels
24
Top seal removed
Product Flow
40a
26
Fig. 4a

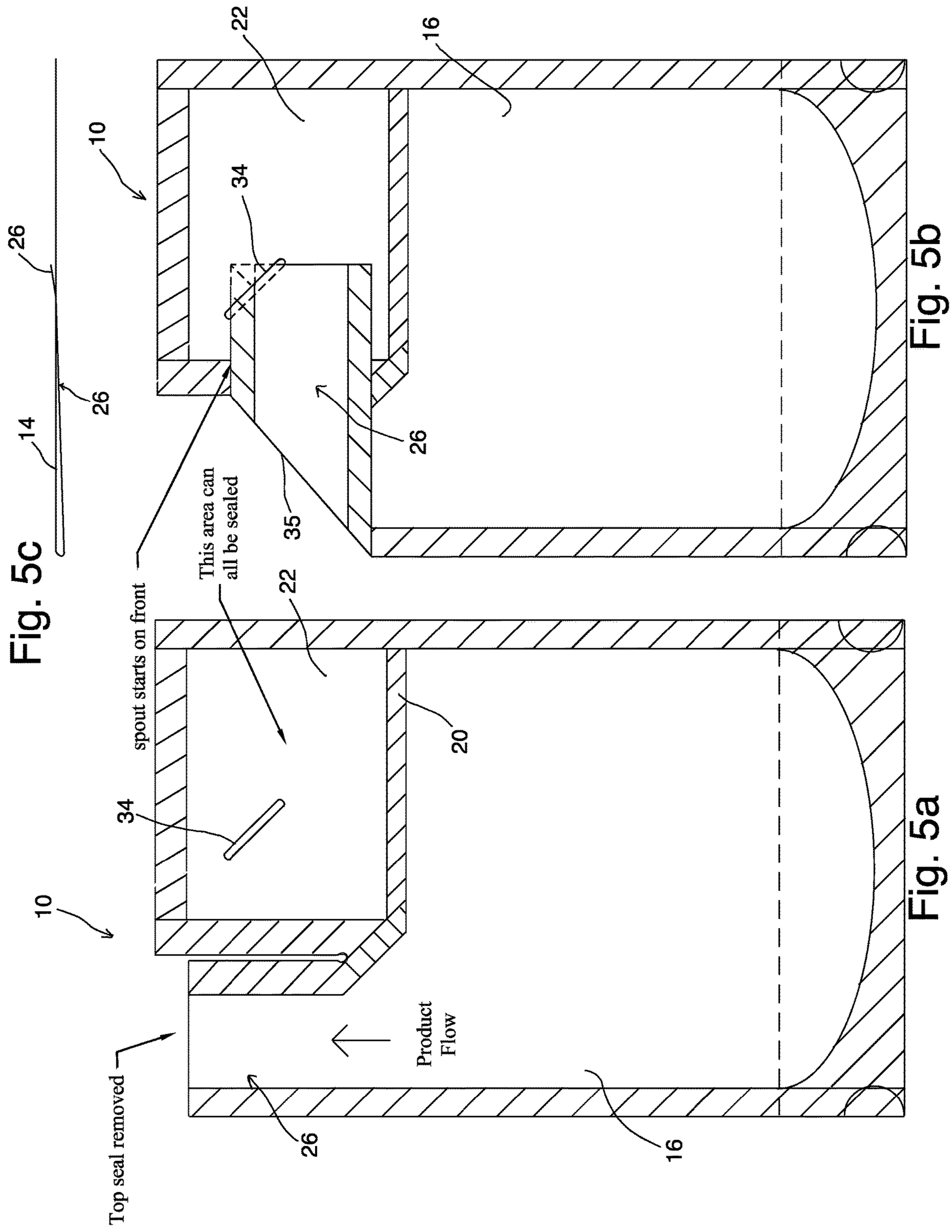



Fig. 5c

Fig. 5b

Fig. 5a

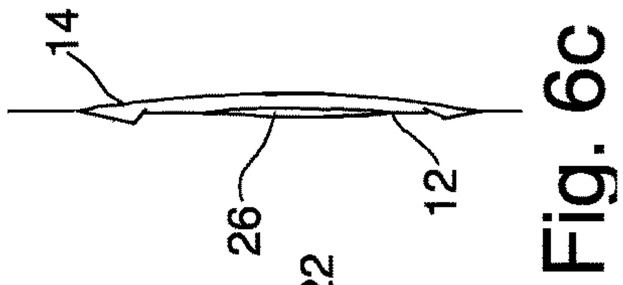



Fig. 6c

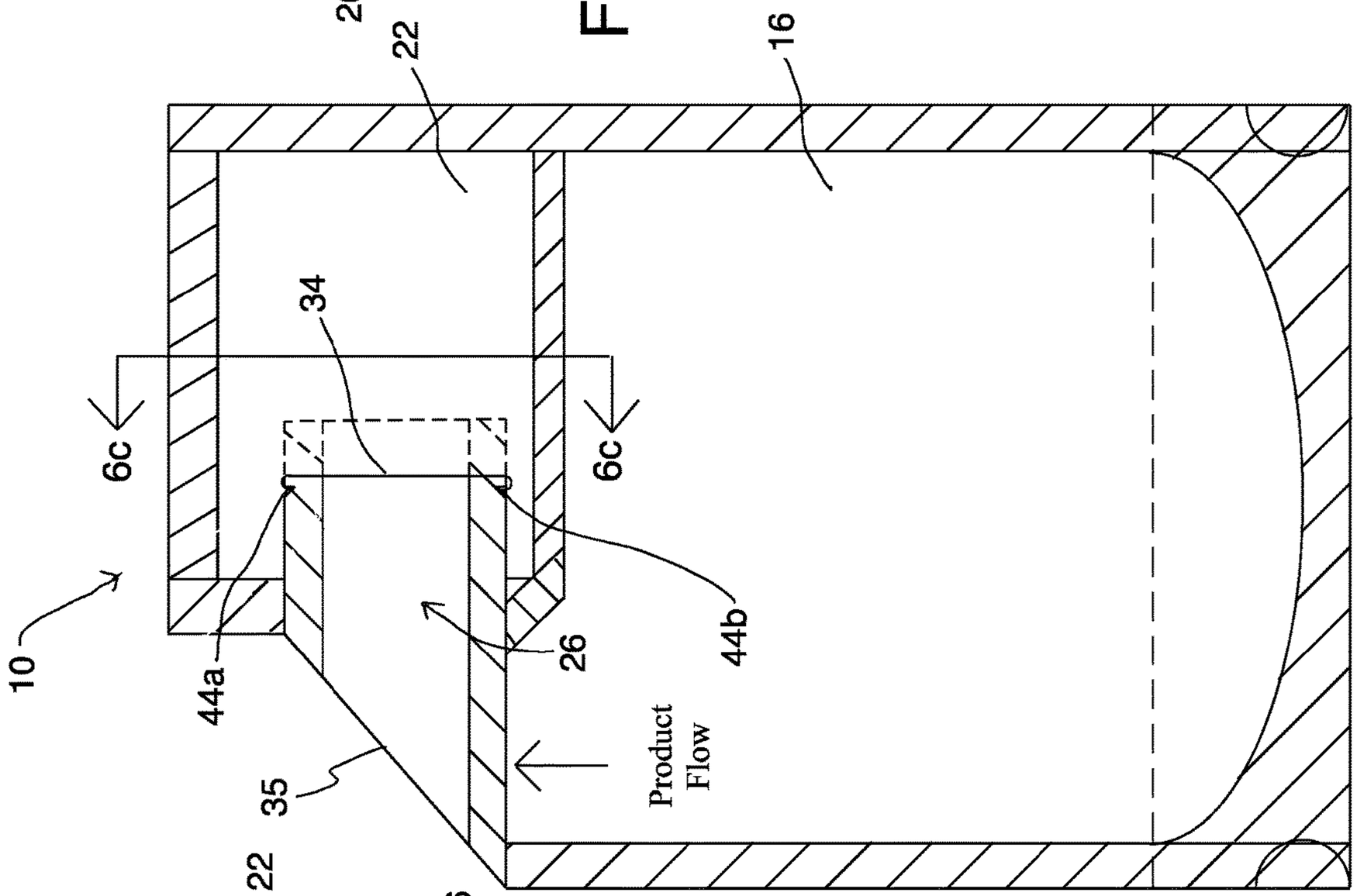



Fig. 6b

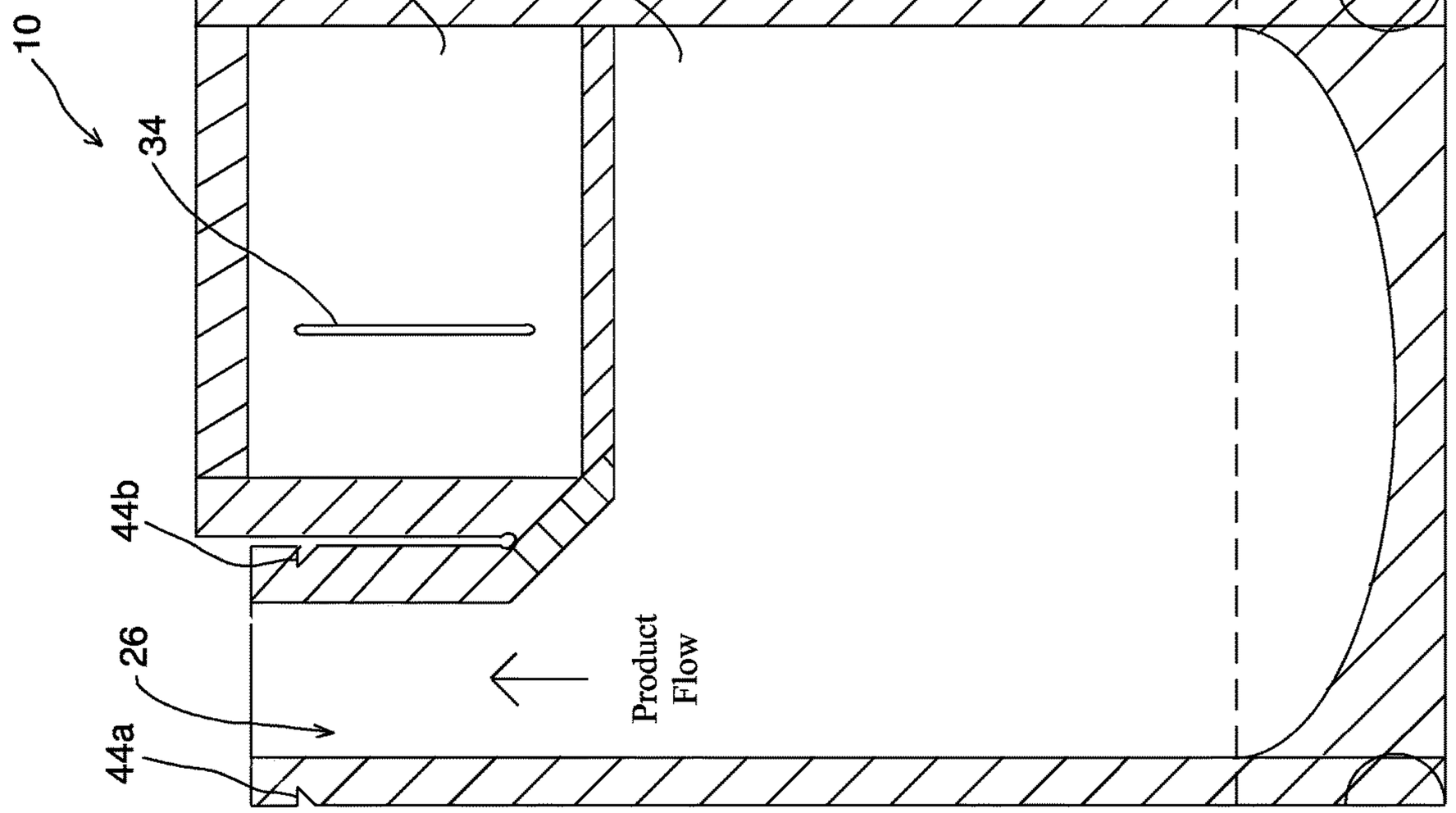



Fig. 6a

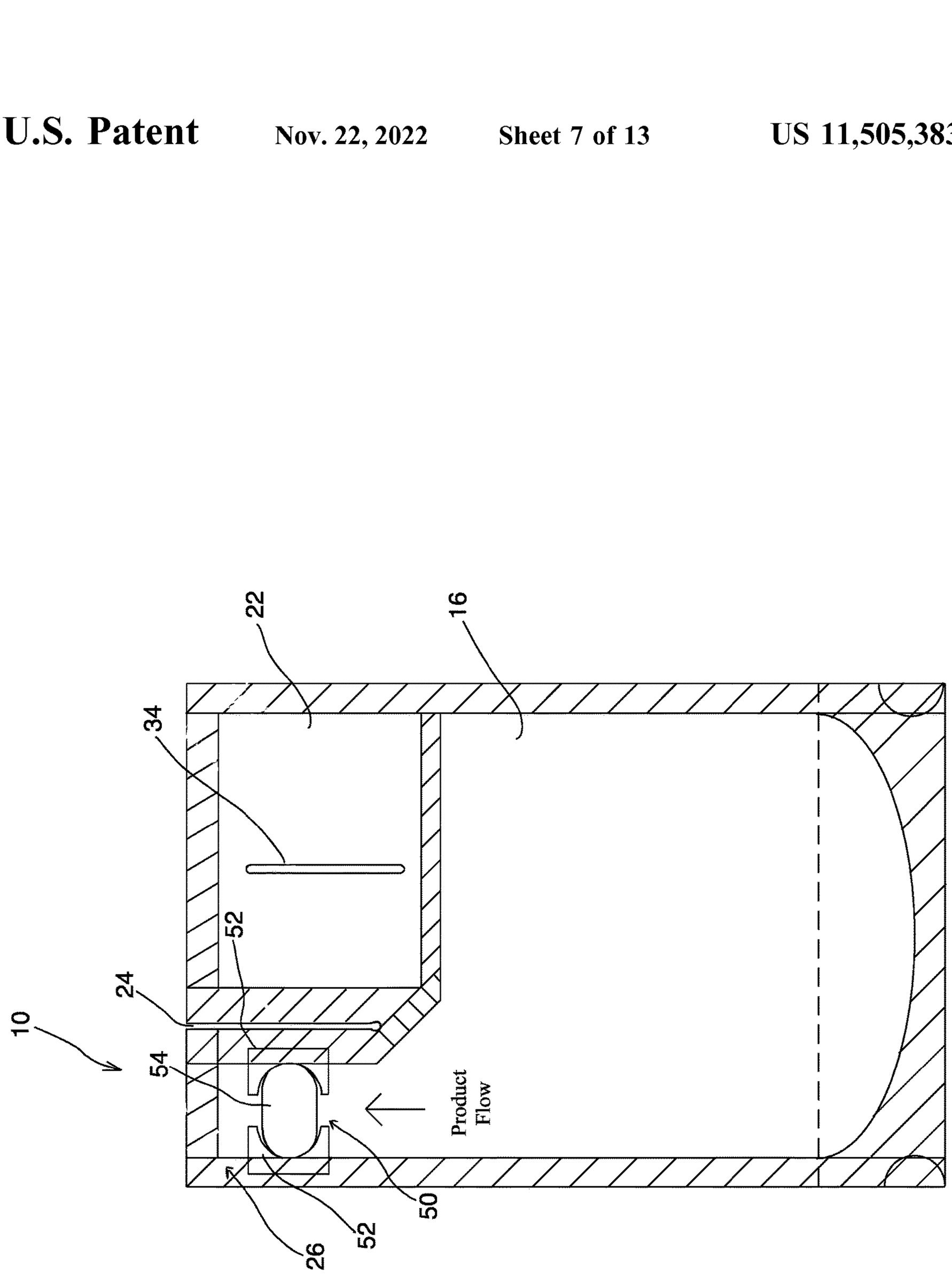



Fig. 7

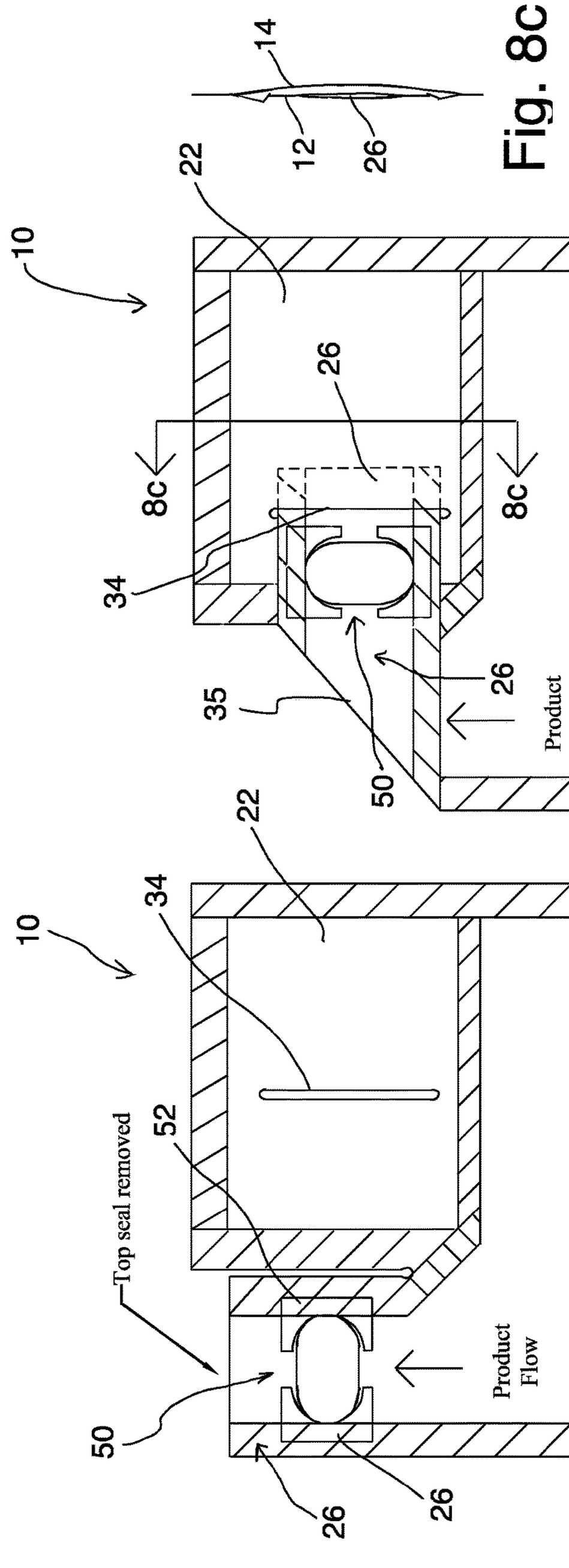



Fig. 8c

Fig. 8b

Fig. 8a

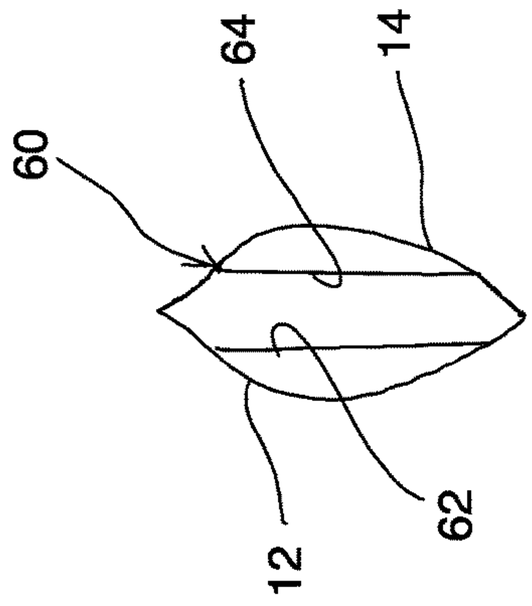

60
64
14
12
62

Fig. 9b

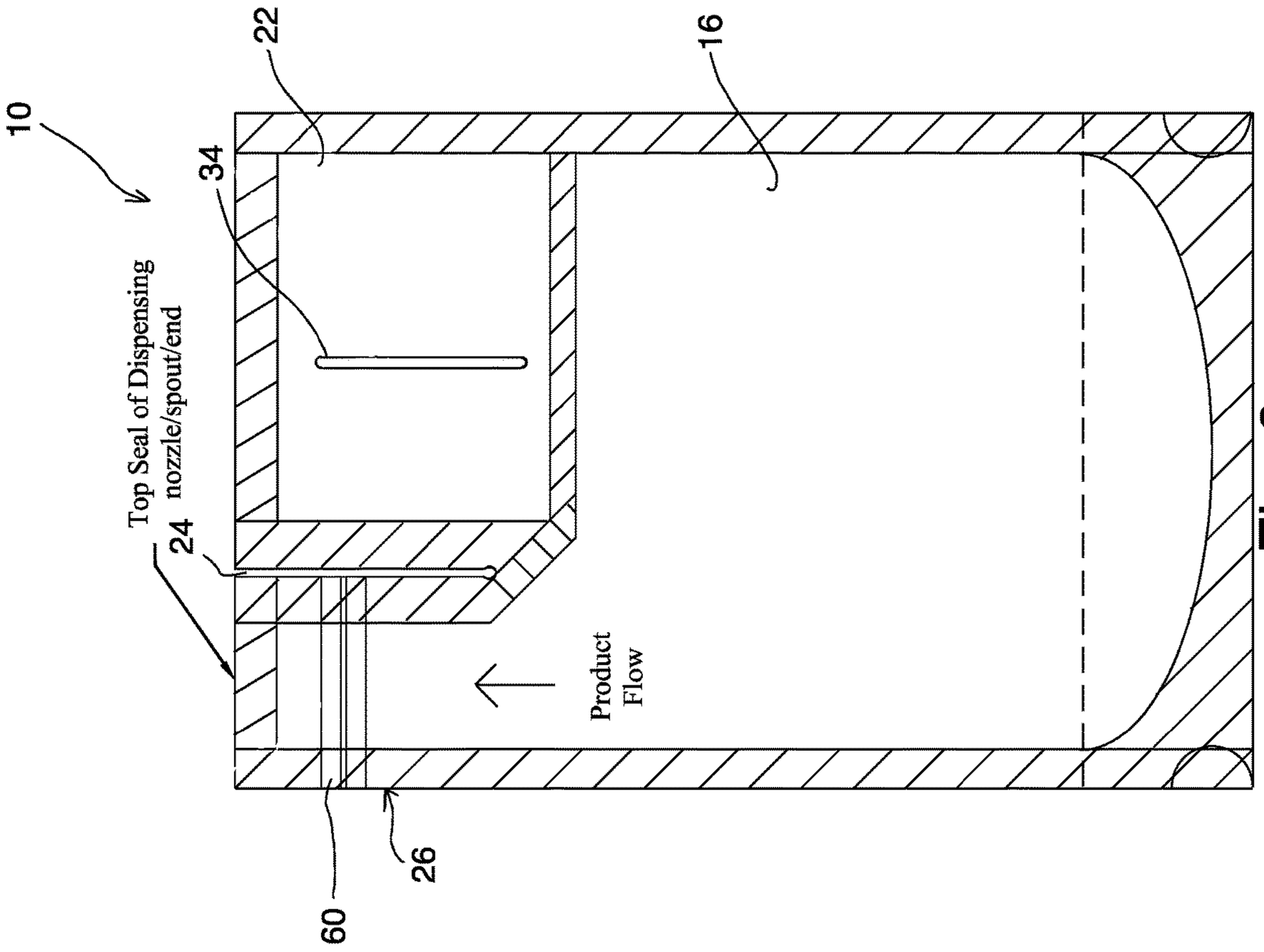

10
22
16
34
Top Seal of Dispensing nozzle/spout/end
24
Product Flow
60
26

Fig. 9a

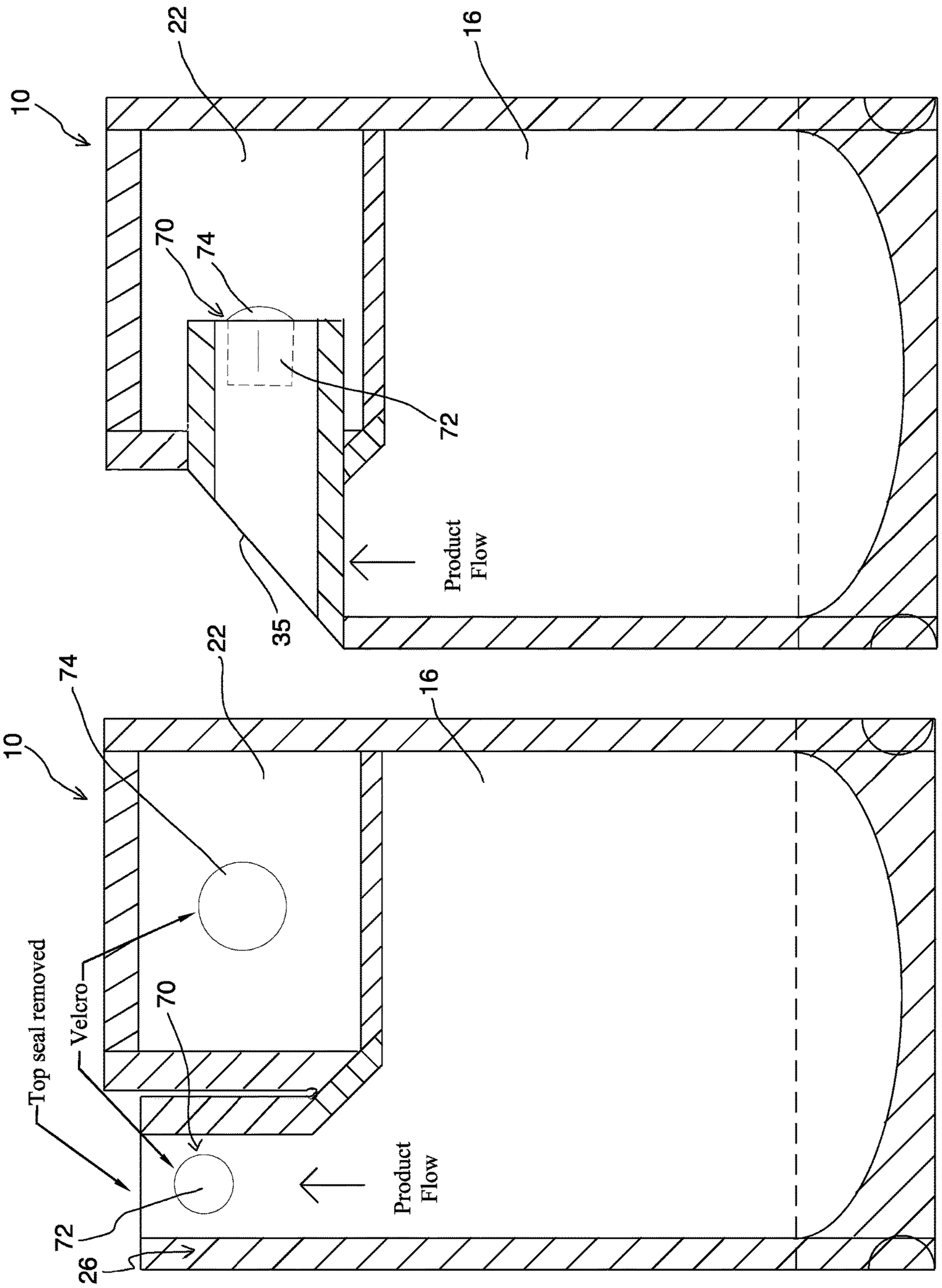



Fig. 10b




Fig. 10a

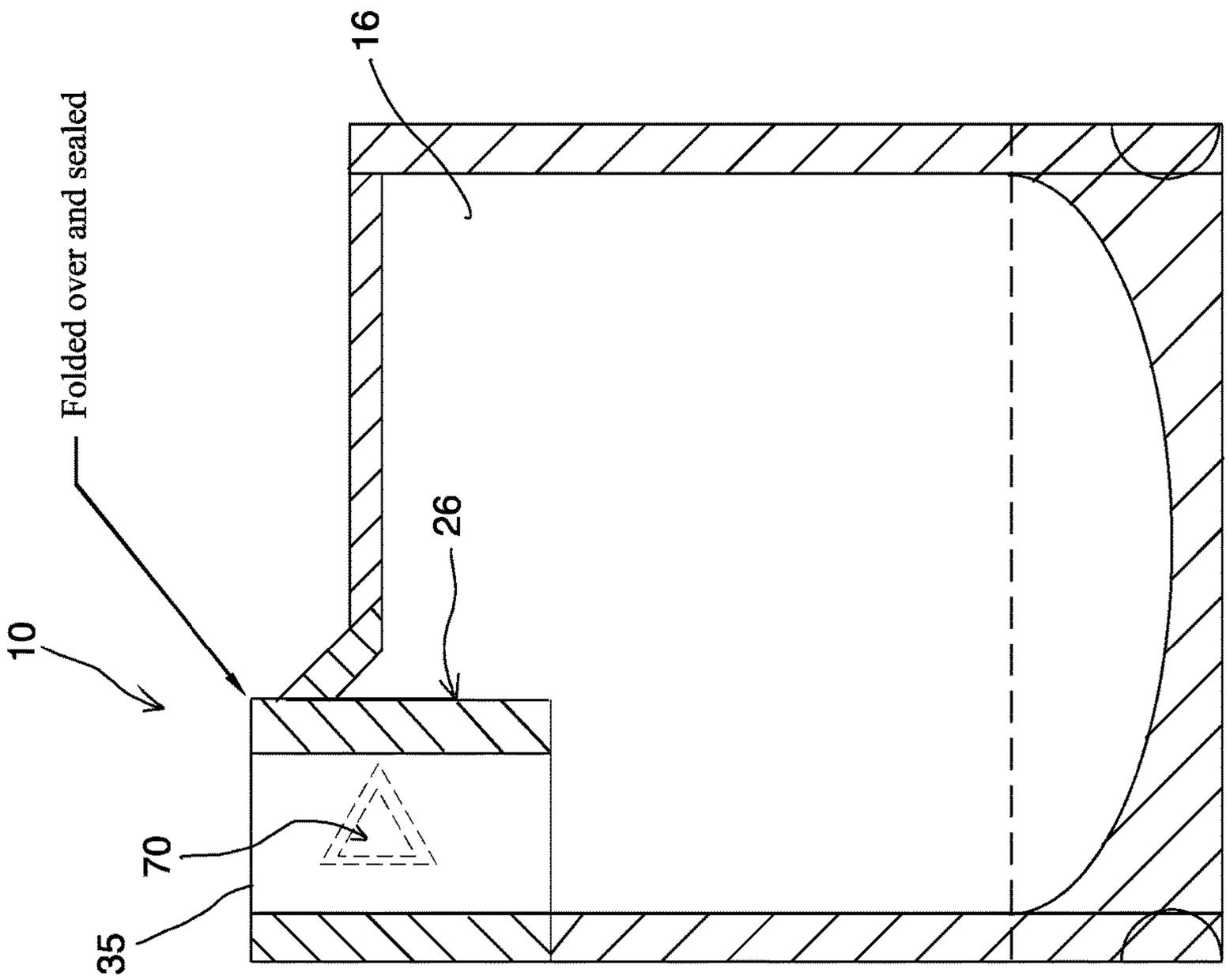



Fig. 11b

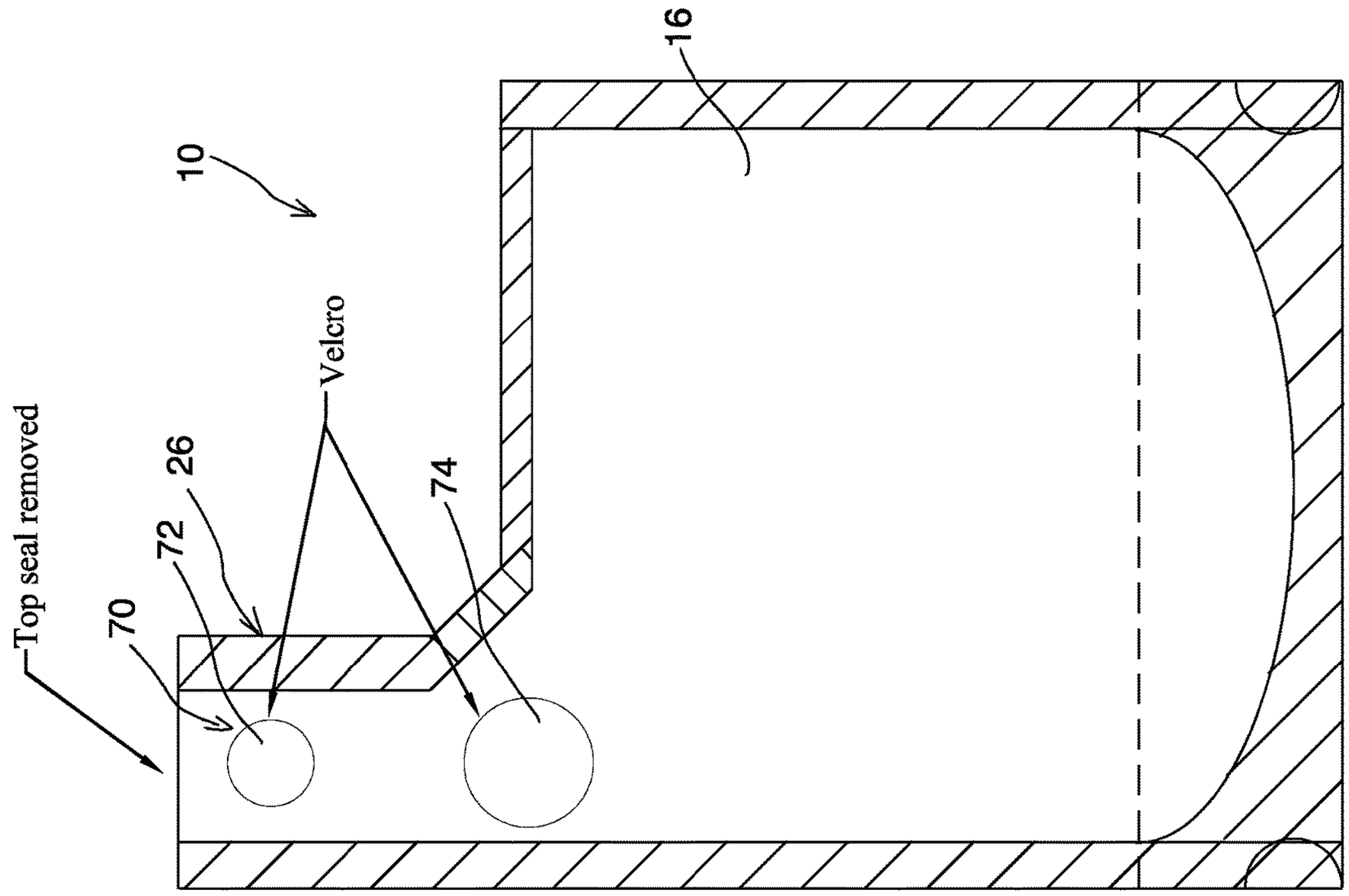



Fig. 11a

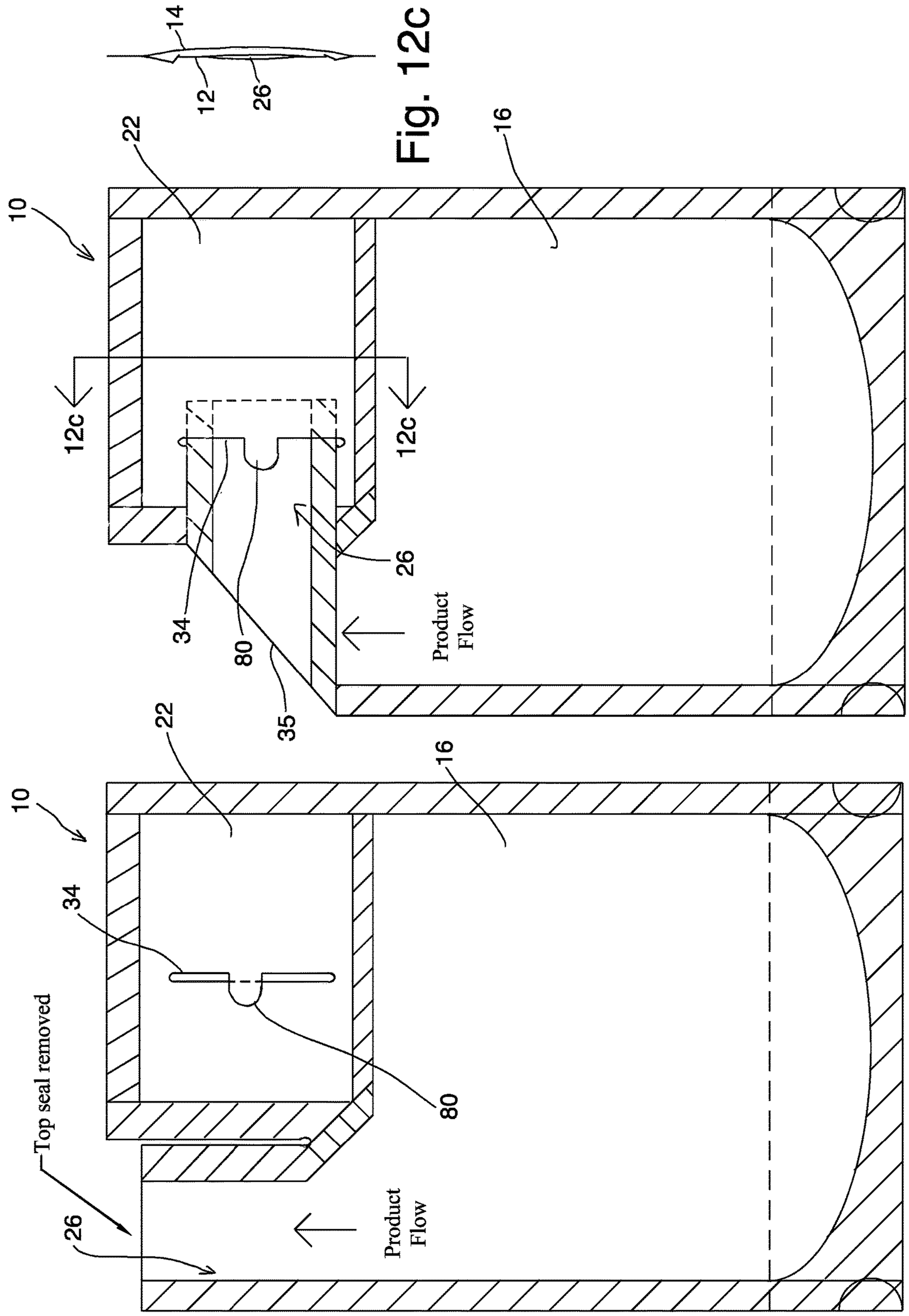
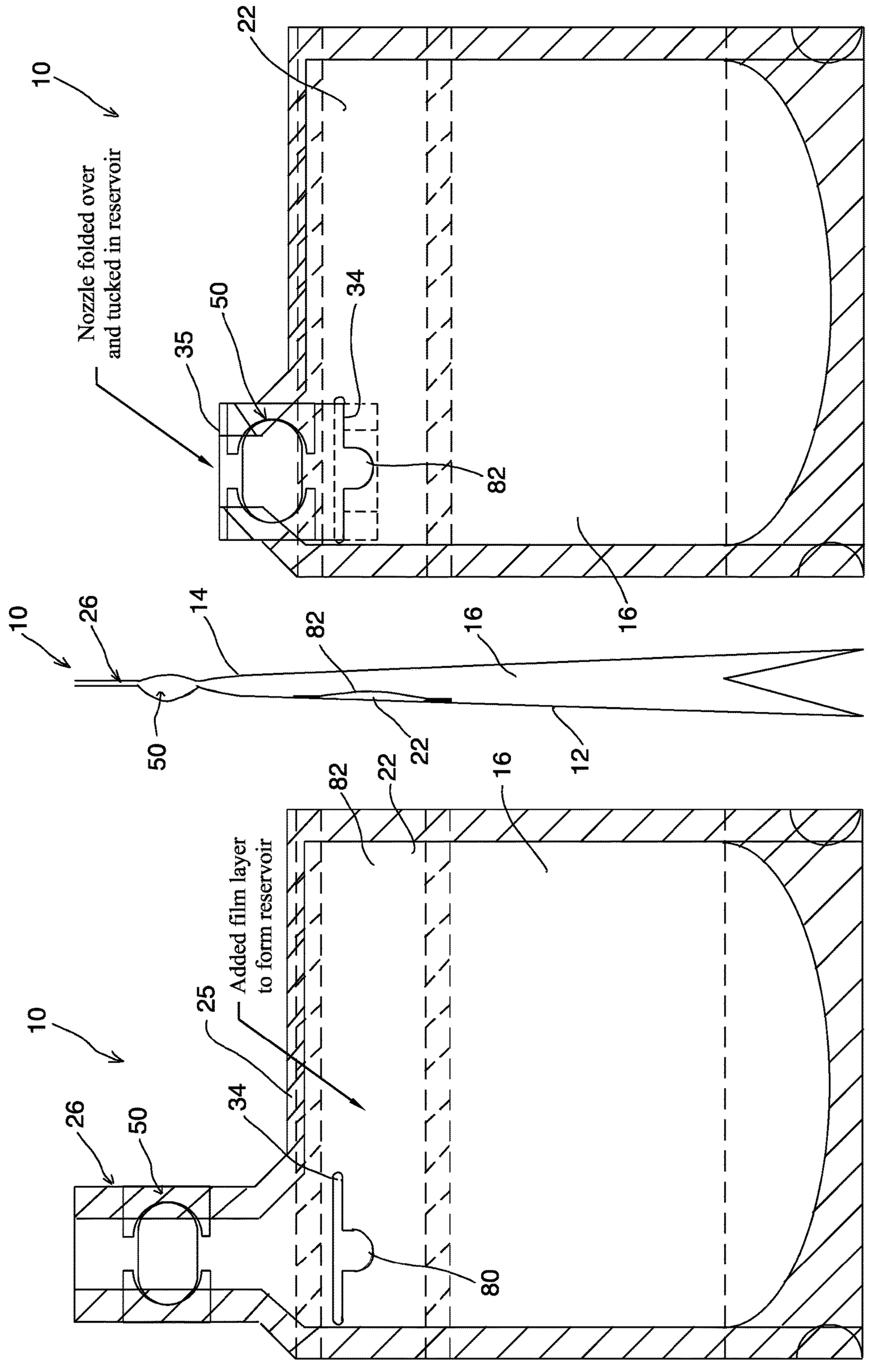



Fig. 12c

Fig. 12b

Fig. 12c


10
Nozzle folded over and tucked in reservoir
35
50
34
22
82
16
Fig. 13c
10
26
14
82
16
50
22
12
Fig. 13b
82
22
16
Added film layer to form reservoir
25
10
26
50
34
80
Fig. 13a

# PACKAGE HAVING A SPOUT RESERVOIR/RETAINING FEATURE

## PRIORITY

This Application claims priority to and the benefit of U.S. Provisional Patent Application No. 62/411,138, filed Oct. 21, 2016, which is incorporated fully herein by reference.

## FIELD OF THE INVENTION

The present invention relates generally to flexible packaging and, more particularly, to packages, and methods for forming and using packages, having a drip resistant securing feature.

## BACKGROUND OF THE INVENTION

Flexible packages are used for containing a wide variety of items, both solid and liquid, such as beverages, lawn products and food products. More and more packages, including flexible packages, are being used for the containment and or dispensing of food, liquids or medical products.

More and more focus is being directed to providing products designed to be easier for the adults in the household to use, but may contain items or materials that are messy or dangerous for users to come into contact with. One example of this is flexible packaging containing laundry detergent or cleaning solutions. Other liquids having higher viscosity (e.g., honey, lotions, etc.) can be messy when they leak from packages.

The consumer opens the pouch or packaging to access the contents to use or dispense. Any contents left in the pouch can have a tendency to drip or leak, exposing the user to the potentially messy or harmful contents. There is a need in the industry for a pouch or package that can be opened by a user and then operated in a fashion that prevents the contents from dripping or leaking out of the pouch.

## SUMMARY OF THE INVENTION

The present invention addresses certain problems facing packages and the packaging industry. Embodiments of the present invention are directed to a flexible package designed to make it more resistant to dripping or leaking after opening.

The package or pouch of the present invention can include an intermediate seam that divides the packaging into a package interior and a reservoir or containment portion. A portion of the intermediate seam can have a slit or can be otherwise divided to form a spout that is used to pour out the contents of the package. The reservoir or containment portion may include one or more slits or openings that are sized and shaped to receive a free end of the spout portion. The reservoir or containment portion can serve to selectively retain the folded spout and/or to ensure that any contents that may remain in the spout portion, or that may leak out of the packaging, would then be captured in the reservoir.

The spout may include one or more closure mechanisms to allow for the automatic or selective closure of the spout. The closure mechanism may include a pressure or fluid lock, a zipper, valve, adhesives, and the like.

The device of the present invention may also include one or more attachment devices designed to permit the attachment of the spout to another portion of the packaging. The attachment devices may include hook and loop fasteners (e.g., Velcro®), snaps, reusable adhesives, and the like. The slit in the reservoir and the attachment devices permit the folding over of the spout to create a fold or kink that assists in restricting the flow of fluid out of the spout.



The detailed technology and preferred embodiments implemented for the subject invention are described in the following paragraphs accompanying the appended drawings for people skilled in this field to well appreciate the features of the claimed invention. It is understood that the features mentioned hereinbefore and those to be commented on hereinafter may be used not only in the specified combinations, but also in other combinations or in isolation, without departing from the scope of the present invention.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1***a* shows a package having a pliable spout feature and reservoir or containment portion, in accordance with embodiments of the present invention.

FIG. **1***b* shows a top view of the package of FIG. **1***a*, in accordance with embodiments of the present invention.

FIG. **2***a* shows a package having a pliable spout feature with a seal removed, in accordance with embodiments of the present invention.

FIG. **2***b* shows a package having a pliable spout feature positioned in a reservoir or containment portion, in accordance with embodiments of the present invention.

FIG. **2***c* shows a cross section of FIG. **2***b* along line **2***c*-**2***c*, in accordance with embodiments of the present invention.

FIG. **2***d* shows a cross section of an example embodiment having a reservoir or containment portion made from one or more panels of material formed or added to the packaging, in accordance with embodiments of the present invention.

FIG. **3***a* shows a package having a pliable spout feature with a seal removed and a spout retaining feature, in accordance with embodiments of the present invention.

FIG. **3***b* shows a package having a pliable spout feature positioned in a spout retaining feature, in accordance with embodiments of the present invention.

FIG. **3***c* shows a top view of FIG. **3***b*, in accordance with embodiments of the present invention.

FIG. **4***a* shows a package having a pliable spout feature with a seal removed and a spout retaining feature, in accordance with embodiments of the present invention.

FIG. **4***b* shows a package having a pliable spout feature positioned in a spout retaining feature, in accordance with embodiments of the present invention.

FIG. **4***c* shows a top view of FIG. **4***b*, in accordance with embodiments of the present invention.

FIG. **5***a* shows a package having a pliable spout feature with a seal removed and a spout retaining feature, in accordance with embodiments of the present invention.

FIG. **5***b* shows a package having a pliable spout feature positioned in a spout retaining feature, in accordance with embodiments of the present invention.

FIG. **5***c* shows a top view of FIG. **5***b*, in accordance with embodiments of the present invention.

FIG. **6***a* shows a package having a pliable spout feature with a seal removed, a securing feature and a spout retaining feature, in accordance with embodiments of the present invention.

FIG. **6***b* shows a package having a pliable spout feature positioned in a spout retaining feature, in accordance with embodiments of the present invention.

FIG. **6***c* shows a cross section of FIG. **6***b* along line **6***c*-**6***c*, in accordance with embodiments of the present invention.

FIG. **7** shows a package having a closure valve mechanism disposed in a pliable spout feature with a seal and a spout retaining feature, in accordance with embodiments of the present invention.

FIG. **8***a* shows a package having a closure valve mechanism disposed in a pliable spout feature with a seal removed and a spout reservoir/retaining feature, in accordance with embodiments of the present invention.

FIG. **8***b* shows a spout and closure valve mechanism positioned in a reservoir containment feature, in accordance with embodiments of the present invention.

FIG. **8***c* shows a cross section view of FIG. **8***b* at line **8***c*-**8***c*, in accordance with embodiments of the present invention.

FIG. **9***a* shows a package having a closure mechanism disposed in a pliable spout feature with a top seal removed, in accordance with embodiments of the present invention.

FIG. **9***b* shows a top view of the spout of FIG. **9***a*, in accordance with embodiments of the present invention.

FIG. **10***a* shows a package having a pliable spout feature with a seal removed and a retaining feature, in accordance with embodiments of the present invention.

FIG. **10***b* shows a package having a pliable spout feature operatively coupled to a spout retaining feature, in accordance with embodiments of the present invention.

FIG. **11***a* shows a package having a pliable spout feature with a seal removed and a retaining feature, in accordance with embodiments of the present invention.

FIG. **11***b* shows a package having a pliable spout feature operatively coupled to a spout retaining feature, in accordance with embodiments of the present invention.

FIG. **12***a* shows a package having a pliable spout feature without a seal and a spout retaining feature with a tab, in accordance with embodiments of the present invention.

FIG. **12***b* shows a package having a pliable spout feature operatively coupled to a spout retaining feature having a tab, in accordance with embodiments of the present invention.

FIG. **12***c* shows a cross section view of FIG. **12***b* along line **12***c*-**12***c*, in accordance with embodiments of the present invention.

FIG. **13***a* shows a package having a pliable spout feature extending from a top seam without a seal and a spout retaining feature, with a tab, in accordance with embodiments of the present invention.

FIG. **13***b* shows a cross section view of FIG. **13***a*, in accordance with embodiments of the present invention.

FIG. **13***c* shows a package having a pliable spout feature operatively coupled to a spout retaining feature having a tab, in accordance with embodiments of the present invention.

While the invention is amenable to various modifications and alternative forms, specifics thereof have been shown by way of example in the drawings and will be described in detail. It should be understood, however, that the intention is not to limit the invention to the particular example embodiments described. On the contrary, the invention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the invention as defined by the appended claims. For illustrative purposes, cross-hatching, dashing or shading in the figures is provided to demonstrate sealed portions and/or integrated regions or devices for the package.

## DETAILED DESCRIPTION OF THE INVENTION

In the following descriptions, the present invention will be explained with reference to example embodiments thereof. However, these embodiments are not intended to limit the present invention to any specific example, embodiment, environment, applications or particular implementations described in these embodiments. Therefore, description of these embodiments is only for purpose of illustration rather than to limit the present invention. It should be appreciated that, in the following embodiments and the attached drawings, elements unrelated to the present invention are omitted from depiction; and dimensional relationships among individual elements in the attached drawings are illustrated only for ease of understanding, but not to limit the actual scale.

References to "top," "bottom," "front," "side," "back" and the like are for illustrative purposes only and are not meant to limit the scope of the disclosed invention.

Referring generally to FIGS. **1***a*-**13***c*, a package **10** of the present invention can comprise a front panel portion **12** and a back panel portion **14**, defining an interior compartment **16** accessible through an access opening **15**. One or more of the package portions can be constructed of a flexible material, a rigid material, a semi-rigid material, and the like. The front and back panel portions **12**, **14** can be formed from the shaping and sealing of a single web member or material, or through the sealing or joining of one or more separate web members or materials. One or more of the portions of the package **10** may be gusseted. Placing a gusset on a bottom panel **18** also provides the product with the ability to stand up on its own. Other panels, such as a side panel, could be gusseted as well.

The joining and/or shaping of the panels generally define the inner cavity or interior **16** having an adjustable internal volumetric capacity. The interior **16** is capable of storing, transporting and/or dispensing product or other objects and material therein. The panel portions are often referred to as webs, films, or layers.

The package **10** may also include an intermediate seal **20** that defines the interior **16** and a reservoir or containment pocket **22**. As illustrated in FIG. **1***a*, the intermediate seal **20** may extend between a side seal **23** of the package **10** and a top seal **25** of the package. The intermediate seal **20** may extend between any seals of the package **10**. The seal **20** may take on various shapes, sizes, and construts. A cut, gap, or separation **24** may be provided in a portion of the intermediate seal **20**, or along a portion of the package, to form a dispensing end or spout portion **26**. The contents disposed in the interior **16** of the package **10** can flow or travel out of a spout portion **26**, via the access opening **15**. In another embodiment of the present invention, the reservoir, retention, or containment portion **22** may be formed by adding one or more layers of material (e.g., package **10** or one or more separate layers or materials) to the front panel portion **12** or the back panel portion **14**.

The spout portion **26** may include a closure seal **30** that prevents the contents of the package **10** from escaping the package **10** during transportation and handling. The package **10** may include a closure seal **30** removal feature or mechanism **32**, such as perforations (e.g., laser or machine created), tears, slits, notches, and the like, that permits a user to easily remove the closure seal to access the contents of the package **10**. Alternatively, a user may utilize scissors or other cutting means or devices to remove the closure seal **30**.

Continuing with FIG. **1***a*, the front panel portion **12** of the reservoir **22** can include a slit or opening **34** that may extend a distance between the top seal **25** and the intermediate seal **20** and generally parallel to a longitudinal axis of the spout portion **26**. The slit **34** may provide access to an interior of the reservoir **22**. The slit **34** may have any shape and size and

may be oriented in any number of directions to facilitate the retention features disclosed herein. In the example embodiment of FIGS. **5***a*-**5***c*, for example, the slit **34** is angularly oriented to a long axis of the spout portion **26**.

As illustrated in FIGS. **2***a*-**2***d*, once the closure seal **30** has been removed from the spout portion **26** and the contents or a portion of the contents are removed or forced out of the package, the spout portion **26** can be folded over or kinked and tucked into the slit **34**, as particularly illustrated in FIG. **2***b*. The opening or end of the spout portion **26** is positioned in the reservoir **22**. In this configuration, any remaining contents in the interior **16** of the package **10** will be restricted from flowing past the fold, kink or bend **35**. Any contents that may get past the fold, or any content residue that remains in the spout portion **26** after folding, may then leak into or be contained by the reservoir **22**. This prevents the contents from leaking out onto the packaging, or the surrounding environment, and potentially causing a mess or exposure to a user. As such, the reservoir or containment portion **22** can serve to selectively retain the folded spout and/or to ensure that any contents that may remain in the spout portion, or that may leak out of the packaging, would then be captured in the reservoir.

In another embodiment of the present invention, as illustrated in FIG. **2***d*, the reservoir **22** may be formed by adding one or more layers of material **17** (e.g., package **10** material, or a separate film or material) to the front panel portion **12** or the back panel portion **14**.

The interior of the reservoir **22** may include a one-way valve or like containment feature operatively disposed therein to prevent any contents or residue from the spout portion **26** that leaks into the reservoir **22** from leaking back out. In another embodiment, the one-way valve may be operatively disposed in the intermediate seam **20** connecting the reservoir **22** to the interior **16** of the packaging **10**. Any contents that may leak from the spout portion **26** into the reservoir **22** can flow back into the interior **16** of the package **10**. The one-way valve prevents the contents of the package **10** from flowing through the one-way valve back into the reservoir **22**.

In another example embodiment, as illustrated in FIGS. **3***a*-**3***c*, the front panel portion **12** of the reservoir or containment area **22** may include two or more slits. In this example embodiment, the spout portion **26** may be folded or bent over and inserted into a first slit **36***a* and then woven or threaded out of a second slit **36***b*. The retaining section **34** of the front panel portion **12** may be formed between the first slit **36***a* and the second slit **36***b* to retain or restrain a free end of the spout portion in order to maintain the fold **35**, which restrains the flow of contents out of the spout portion **26**. The retaining section can simply be part of the package material, or can include a rigid or semi-rigid member or feature to assist in retaining the spout portion **26**, or in applying a degree of pressure to pinch off the end of the spout portion **26**. Similar to other example embodiments, the fold **35** and the retaining section **38** work to prevent the flow of the contents from the package **10** and spout portion **26**. In some example embodiments, the front panel portion **12** and back panel portion **14** in the region of the containment area **22** may be sealed together or may comprise a single panel.

Turning to FIGS. **4***a*-**4***c*, the reservoir portion **22** may include a first slit **40***a* extending through the first panel portion **12** and a second slit **40***b* extending through the back panel portion **14**. The first slit **40***a* and the second slit **40***b* may be in or out of register. In this example embodiment, once the spout portion **26** is folded or bent, a free end of the spout portion **26** can be fed or threaded into the first slit **46***a* and out the second slit **46***b* such that its free end extends away from the back panel portion **14**, as illustrated in FIG. **4***c*. The front panel portion **12** and the back panel portion **14** may also comprise a single panel instead of two distinct panels.

As illustrated in FIGS. **5***a*-**5***c*, only a limited portion of the spout portion **26** may be fed or inserted into a slit **34** of the reservoir or containment area **22**. The slit **34** can be arranged in any orientation relative to a longitudinal axis of the spout portion **26**. In this particular exemplary embodiment, the slit **34** is angled relative to a long axis of the spout portion **26** such that only a corner section of the spout portion **26** extends into the slit **34**. The corner section may be disposed in the reservoir **22** or may extend through a second slit (not shown) in the back panel portion **14** such that it extends completely through the packaging **10**. The entire reservoir or containment area **22** may be sealed such that it does not include a reservoir interior (e.g., sealing the first and second panels **12**, **14** together in this area).

The spout portion **26** may also include one or more securing features formed therein to assist in retaining the spout portion **26** in the reservoir **22** or slit **34**. As illustrated in FIGS. **6***a*-**6***c*, the spout portion **26** may include one or more notches **44***a* and **44***b* formed into side seams proximate to a free end of the spout portion **26**. As illustrated in FIG. **6***b*, the notches **44***a* and **44***b* engage ends of slit **34** when tucked into the reservoir **22**. The notches **44***a* and **44***b* assist in restraining rearward movement of the spout portion **26** out of the slit **34**. As with other example embodiments, a free end of the spout portion **26** may extend partially or completely through the packaging **10**. Clips, members, bars, pins, and the like can be further employed to assist in retaining the free end of the spout portion **26** to the package or the retention area **22**.

Referring to FIGS. **7**-**9***b*, one or more closure mechanisms may be operatively disposed in or on the spout portion **26** to permit selective closure of a throat or opening of the spout portion **26**. These closure mechanisms may include various valves, zippers, or like closures, constructs, and structures, and forming methods and can be provided with embodiments of the package **10** of the present invention. For instance, various embodiments of closure and re-closable devices, and formation methods, detailed herein are envisioned for use with, and can incorporate aspects of, those disclosed in U.S. Patent Publication Nos. 2016/0297571, U.S. Pat. Nos. 7,207,717, 7,883,268, and 8,613,547. Accordingly, the above-identified patent disclosures are fully incorporated herein by reference in their entirety.

Referring to FIGS. **7**-**8***c*, packages **10** of the present invention can include one or more valve closures **50**, including a bubble-shaped closure, hollow or solid protrusions, extending members, convex-shaped features, shape memory features, or any like structure or feature having a shape and size to provide selective blocking of an access opening of the spout portion **26**. Upon application of pressure by the end user to a portion of the package, product from within the inner cavity **16** can be forced out past the closure **50**, while remaining within the inner cavity **16** until such pressure is applied (even with movement, tipping, or placing of the package **10** completely upside down). Any of the embodiments described and depicted herein can include the valve closure **50**, along or at any portion of the package **10**, including any spout or like feature or portion.

The valve closures **50** can be applied to a portion of the front or back panel portions **12** or **14**, with end portions **52** extending from the bubble-shaped device for sealing to the portions **12** or **14**. An interior **54** of the device **50** can be

filled with fluid (e.g., air or liquid), or can be constructed at least in part of a spongy, solid, or shape-memory material. The device **50** may also be attached to a patch of material that can be pre-formed and disposed along any portion of the package **10** to provide the restrictive valve functionality described herein.

In the application of valve closures **50** that include an air pressurized bubble, or other closure valve types such as rubber, that have forgiveness, flexibility, and shape memory (causing them to spring back toward the original shape after squeezing of the package), the sealing and placement system of the present invention is desired. This sealing method allows the panel **14** (or **12**) opposing the valve closure **50** to press down against the valve, pinching off any opportunity for the product, or air, to pass by it until selective dispensing is performed (e.g., via applied pressure to a portion of the package **10**). Other materials, members, or features can be provided to interface with or engage the closure **50** to facilitate the valve and closure functionality described herein.

Further, with some valves types **50**, it is not desirable to actually seal the opposing panel of material into or onto the valve **50** itself, especially if the valve is a more solid material without much, or any, memory or forgiveness. In such applications, the flexible material of the package **10** is relied on to flex away from the valve material **50** to allow the air or contents (e.g., liquid) to pass by the valve material **50** when the package **10** is squeezed or otherwise receives adequate pressure.

As illustrated in FIGS. **8***a* and **8***b*, spout portion **26** having the valve closure **50** may be folded over and a free end inserted into slit **34** as an added measure to prevent contents of the packaging **10** from leaking if an unintended weight or other pressure squeezes the package **10** when not in use. The free end of the spout portion **26** may be retained in the reservoir **22** or may extend completely through the packaging as described in various embodiments.

As illustrated in FIGS. **9***a* and **9***b*, the closure mechanism may include a reclosable zipper **60**. In certain embodiments, the zipper **60** can include a first portion **62** attached to the inside of the first panel portion **12**, and a second portion **64** attached to the inside of the second panel portion **14**. As such, the portions **62**, **64** are adapted for selective mateability, and opening and closing of the mechanism **60**.

The packaging **10** may also include one or more attachment devices **70** designed to attach the spout portion **26** to another portion of the packaging **10**. The attachment devices **70** may include hook and loop fasteners (e.g., Velcro®), snaps, buttons, clasps, members, adhesives, external zippers, and the like. The attachment devices **70** may include a first attachment portion **72** fixed or disposed on the spout portion **26** and a second attachment portion **74** fixed or disposed on another portion of the packaging **10**, such as the retention area **22**. As illustrated in FIGS. **10***a* and **10***b*, the first attachment portion **74** is disposed on the spout portion **26** while the second attachment portion **74** is disposed on the first panel portion **12** of the retention area **22**. When the spout portion **26** is folded over and attached to the second attachment portion **74** the contents of the packaging **10** are restricted from flowing out of the spout portion **26** by the fold **35**.

As illustrated in FIGS. **11***a* and **11***b*, the second attachment portion **72** may be disposed on a portion of the packaging **10** other than area **22**. In this instance, area **22** may be eliminated. As can be seen, the spout portion **26** may be folded over to create a fold **35** and the attachment portions **72**, **74** are mated together to maintain the fold **35** and prevent the contents from escaping the interior **16** of the packaging **10**.

As illustrated in FIGS. **12***a*-**12***c*, a tab, flap, or other gripping member **80** may be disposed on the reservoir or containment area **22** and may be proximate to the slit or opening **34**. The tab **80** can assist a user by permitting the user to pull the tab while inserting the spout portion **26** into or through the slit **34** (or used to pull the spout portion **26** out of the slit **34**). The tab **80** may be manufactured from the package **10** material and may be formed during the manufacturing process, or the tab **80** may be added separately to the packaging **10**.

In another example embodiment, as illustrated in FIGS. **13***a*-**13***c*, the spout portion **26** may extend from the top or upper seal or seam **25** of the packaging **10**. As particularly illustrated in FIG. **13***b*, the reservoir or containment area **22** may be formed or created by adding one or more layers, webs or panels of material to the inner or outer surface of the front panel portion **12** or back panel portion **14**. The reservoir **22** may extend along only a portion or the entire surface of the packaging **10** depending upon the desired amount of volume. As particularly illustrated in FIGS. **13***a* and **13***c*, the slit **34** may be disposed generally below the spout portion **26** such that when a user desires to save any unused portion of the packing contents, the user may bend or fold the spout portion **26** and insert a free end of the spout portion **26** into the slit **34**. Similar to the other embodiments, the folding or kinking of the spout portion **26** creates a fold **35** that resists the movement of the package **10** contents if pressure is applied to the package **10**. This example embodiment may also include any valve types **50** operatively disposed in the spout portion **26** or the reservoir **22** as previously described herein. In yet other embodiments, the seal **34** and/or the containment area **22** can be integrated with the closure mechanisms (e.g., valve closure **50**), or portions thereof, such that the end of the spout portion **26** can be tucked or otherwise disposed within or along the closure mechanism to facilitate the containment features disclosed herein.

Although the spout portion **26** has been described as extending from a seam of the packaging it is also contemplated that the spout portion **26** can be formed with or extend from any portion of any of the panels of the package **10**. For example, the spout portion **26** may extend from the front panel portion **12**, back panel portion **14**, a bottom panel portion **18**, or side panels.

The packages **10** formed by the present invention can include packages constructed, in whole or in part, of flexible, rigid, semi-rigid, or semi-flexible materials or panels. Briefly, the package panel portions are generally constructed of flexible sheet material such as polyethylene, polyester, metal foil, polypropylene, or polyethylenes or polypropylenes laminated with other materials such as nylon, polyester, and like films. To provide for increased barrier properties, embodiments can use composite or laminate layers of said materials and material of the like. Generally, in such composite or laminate embodiments, a material having preferred sealing characteristics can be joined, bonded or laminated to a material having a different preferred characteristic (e.g., beneficial oxygen barrier properties). Regardless, single sheets, composites/laminates, and a myriad of other materials and techniques known to one skilled in the art may be implemented based on particular usage and manufacturing needs without deviating from the spirit and scope of the present invention. The present invention in certain embodi-

ments permits the flexible package to be made using less expensive or cheaper materials than would otherwise be necessary.

Various embodiments of final packages, reclosable devices, and formation methods detailed herein are envisioned for use with, and can incorporate aspects of, many known packages, systems, and methods, including those disclosed in U.S. Pat. Nos. 5,461,845, 5,782,733, 5,806,984, 5,902,047, 5,951,453, 5,954,433, 6,019,512, 6,820,391, 7,207,717, 8,613,547 and 7,883,268. Accordingly, the above-identified patent disclosures are fully incorporated herein by reference in their entirety.

Various figures and descriptions disclose features and accessories. However, it must be noted that these features are merely illustrative in nature and may be placed in varying locations and under varying configurations and shapes, and still be consistent with the present invention. Various regions of the package can include a handle portion, access devices (e.g., re-closeable zipper devices), and the like. In addition, the shape and configuration for the panel portions are also merely illustrative and can be altered without deviating from the spirit and scope of the present invention. Any of the panel portions, or selected regions thereof, can include various aesthetic and functional graphics, such as logos, instructions, advertising, bar codes, and the like. These graphics can run transverse, parallel, or even in a diagonal orientation to the longitudinal panel edges discussed herein.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and it is, therefore, desired that the present embodiment be considered in all respects as illustrative and not restrictive. Similarly, the above-described methods and techniques for forming the present invention are illustrative processes and are not intended to limit the methods of manufacturing/forming the present invention to those specifically defined herein. A myriad of various unspecified steps and procedures can be performed to create or form the inventive package **10**.

What is claimed is:

**1**. A content control package, comprising: a first panel portion and a second panel portion provided to define an interior content cavity; a spout portion including a valve closure and having an access opening and in fluid communication with the interior content cavity; one or more slits in the first panel portion; and a retention area with a reservoir cavity having an internal volume, the internal volume being separated from the interior content cavity by a seal, wherein the spout portion is bendable at a right angle along a bend line to reach the retention area such that the spout portion aligns with and engages the one or more slits whereby the spout portion extends along a right angle between the interior content cavity and the reservoir cavity, and fluid communication is established between at least a portion of the spout portion and the internal volume of the reservoir cavity; wherein the spout portion aligns with and engages the one or more slits and a portion of the spout portion is not inserted into the reservoir cavity.

**2**. The package of claim **1**, further including a gap provided in the package, generally parallel to the spout portion.

**3**. The package of claim **1**, wherein a portion of the spout portion includes at least one attachment member and the one or more slits includes at least one receiving attachment member, such that the spout portion is removably attachable to the at least one receiving attachment member.

**4**. The package of claim **3**, wherein the at least one attachment member and the at least one receiving attachment member includes hook and loop fasteners.

**5**. The package of claim **3**, wherein at least one of the at least one attachment member and the at least one receiving attachment member includes an adhesive.

**6**. The package of claim **1**, wherein the one or more slits include a tab feature.

**7**. A flexible package, comprising: a first panel portion and a second panel portion provided to define an interior content cavity; a spout portion including a valve closure and having an access opening and in fluid communication with the interior content cavity; and a reservoir area having an internal volume, the internal volume being separated from the interior content cavity by a seal, and one or more slit features in the first panel portion, wherein the spout portion is bendable at a right angle along a bend line to reach the reservoir area such that the spout portion aligns with and engages the one or more slit features whereby the spout portion extends along a right angle between the interior content cavity and the internal volume of the reservoir area, and fluid communication is established between at least a portion of the spout portion and the internal volume of the reservoir area; wherein the spout portion aligns with and engages the one or more slits and a portion of the spout portion is not inserted into the reservoir area.

**8**. The package of claim **7**, wherein the one or more slit features includes a tab feature.

**9**. The package of claim **7**, wherein the one or more slit features includes one slit.

**10**. The package of claim **7**, wherein the one or more slit features includes two or more slits.

**11**. The package of claim **7**, wherein the spout portion includes a removable top seal.

**12**. The package of claim **7**, wherein the one or more slit features are angled away from a longitudinal axis of the spout portion.

**13**. The package of claim **7**, wherein a free end of the spout portion is adapted to extend into the one or more slit features in the first panel and out the second panel.

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